

SCORE Search Results Details for Application 10571302 and
Search Result 20081124_104456_us-10-571-302-1.rag.

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This page gives you Search Results detail for the Application 10571302 and Search Result 20081124_104456_us-10-571-302-1.rag.

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OM protein - protein search, using sw model

Run on: November 24, 2008, 10:45:07 ; Search time 77 Seconds
(without alignments)
390.092 Million cell updates/sec

Title: US-10-571-302-1

Perfect score: 246

Sequence: 1 EDCIPWKGCVNBRHGDCCEGLECWKRBRSEEVCVPKTPKT 40

Scoring table: BLOSUM62

Capex 10.0 Capext 0.5

Searched: 4151667 segs 751288301 residues

Total number of bits satisfying chosen parameters: 4151667

Minimum DB seq length: 0

Maximum DB seq length: 3000000000

Post-processing: Minimum Match 0%

Minimum Hach 0°
Maximum Match 100%

Maximum Match 100%
Listing finds 45 summaries

Database Systems 3 - Chapter 2000000.htm

A_Geneseq_200808:

1: geneseqp1980s:*

2: geneseqp1990s:

3: geneseqp2000:*

4: geneseqp2001:*

5: geneseqp2002:*

6: geneseqp2003a:*

7: geneseqp2003b:*

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9:  geneseqp2004b:*
10:  geneseqp2005:*
11:  geneseqp2006:*
12:  geneseqp2007:*
13:  geneseqp2008:*

```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result	Query					Description
	No.	Score	Match	Length	DB	ID
1	246	100.0	40	5	AAU09425	Aau09425 Psalmopoe
2	246	100.0	40	10	ADY80805	Ady80805 Psalmotox
3	246	100.0	40	11	AEG95747	Aeg95747 Psalmotox
4	246	100.0	40	12	AFH53530	Afh53530 Tarantula
5	246	100.0	40	13	ARW11374	Arw11374 P. cambri
6	246	100.0	41	10	ADY80806	Ady80806 Psalmotox
7	235	95.5	38	11	AEG95748	Aeg95748 Psalmotox
8	235	95.5	38	12	AFH53531	Afh53531 Tarantula
9	235	95.5	38	13	ARW11375	Arw11375 P. cambri
10	229	93.1	37	11	AEG95749	Aeg95749 Psalmotox
11	229	93.1	37	12	AFH53532	Afh53532 Tarantula
12	229	93.1	37	13	ARW11376	Arw11376 P. cambri
13	208	84.6	33	11	AEG95750	Aeg95750 Psalmotox
14	208	84.6	33	12	AFH53533	Afh53533 Tarantula
15	208	84.6	33	13	ARW11377	Arw11377 P. cambri
16	197	80.1	31	11	AEG95751	Aeg95751 Psalmotox
17	197	80.1	31	12	AFH53534	Afh53534 Tarantula
18	197	80.1	31	13	ARW11378	Arw11378 P. cambri
19	67.5	27.4	54	10	AEA30177	Aea30177 Pertussis
20	67.5	27.4	58	10	AEA30251	Aea30251 Pertussis
21	67.5	27.4	62	10	AEA30306	Aea30306 Pertussis
22	66	26.8	54	10	AEA30264	Aea30264 Pertussis
23	66	26.8	62	10	AEA30305	Aea30305 Pertussis
24	65	26.4	35	5	AAO15120	Aao15120 Agriospho
25	65	26.4	54	10	AEA30174	Aea30174 Pertussis
26	65	26.4	60	10	AEA30248	Aea30248 Pertussis
27	65	26.4	62	10	AEA30293	Aea30293 Pertussis
28	64	26.0	35	10	AEA30163	Aea30163 Wild-type
29	64	26.0	36	5	AAO15121	Aao15121 Isyndus o
30	63	25.6	36	13	AOG35820	Aog35820 Antimicro
31	63	25.6	62	10	AEA30314	Aea30314 Pertussis
32	62.5	25.4	156	6	ADN40046	Adn40046 Cancer/an
33	62	25.2	51	10	AEA30303	Aea30303 Pertussis
34	62	25.2	54	10	AEA30175	Aea30175 Pertussis

35	62	25.2	60	10	AEA30249	Aea30249 Pertussis
36	62	25.2	62	10	AEA30297	Aea30297 Pertussis
37	61	24.8	34	10	AEA30222	Aea30222 Pertussis
38	61	24.8	34	10	AEA30160	Aea30160 Pertussis
39	61	24.8	54	10	AEA30285	Aea30285 Pertussis
40	61	24.8	54	10	AEA30190	Aea30190 Pertussis
41	60.5	24.6	31	2	AAR53578	Aar53578 Spider ve
42	60.5	24.6	31	2	AAR53574	Aar53574 Spider ve
43	60.5	24.6	31	2	AAR63752	Aar63752 Outward K
44	60.5	24.6	82	4	AAU06025	Aau06025 Cone snai
45	60.5	24.6	127	10	AEN25742	Aen25742 Solanum c

ALIGNMENTS

RESULT 1

AAU09425

ID AAU09425 standard; peptide; 40 AA.

XX

AC AAU09425;

XX

DT 15-JUN-2007 (revised)

DT 07-AUG-2003 (revised)

DT 12-MAR-2002 (first entry)

XX

DE Psalmopoeus cambridgei psalmotoxin 1 (PcTX1) polypeptide.

XX

KW Acid sensitive ion channel 1a blocker; ASIC1a channel blocker; PcTX1;

KW Psalmotoxin 1; South-American tarantula; proton-gated sodium channel;

KW venom.

XX

OS Unidentified.

XX

PN WO200185931-A2.

XX

PD 15-NOV-2001.

XX

PF 10-MAY-2001; 2001WO-IB000934.

XX

PR 10-MAY-2000; 2000US-0203309P.

PR 10-MAY-2001; 2001US-00852378.

XX

PA (CNRS) CNRS CENT NAT RECH SCI.

XX

PI Lazdunski M, Escoubas P, De Weille J, Diochot S;

XX

DR WPI; 2002-066602/09.

DR PC:NCBI; gi39654139.

XX

PT Novel polypeptide functioning as acid sensitive ion channel 1a blocker,
 PT termed Psalmotoxin 1, isolated from venom of South-American tarantula
 PT Psalmopoeus carnbridgei.

XX

PS Claim 6; Fig 1D; 32pp; English.

XX

CC The present invention relates to a pure polypeptide functioning as an
 CC acid sensitive ion channel (ASIC) 1a blocker, called Psalmotoxin 1
 CC (PcTX1). The PcTX1 polypeptide is identified from the venom of the South-
 CC American tarantula Psalmopoeus carmbridgei. The polypeptide of the
 CC invention is useful for inhibiting the proton-gated sodium channel,
 CC ASIC1a. A nucleic acid encoding the PcTX1 polypeptide is useful to
 CC transform animals and establish a line of transgenic animals, and as
 CC probes for hybridisation detection of similar polypeptides functioning as
 CC an ASIC1a channel blocker in other individuals or species and for PCR
 CC experiments, for example to search for genes in other species or with a
 CC diagnostic aim. A PcTX1 antibody is useful in the search for new
 CC polypeptides functioning as an ASIC1a channel blocker or its homologue in
 CC other species. The present sequence represents the C. carmbridgei
 CC Psalmotoxin 1 (PcTX1) polypeptide of the invention. (Updated on 07-AUG-
 CC 2003 to correct OS field.)

CC

CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed
 CC information from BOND.

XX

SQ Sequence 40 AA;

Query Match 100.0%; Score 246; DB 5; Length 40;
 Best Local Similarity 100.0%; Pred. No. 8.9e-22;
 Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 EDCIPWKGVNRHGDCEGLECWKRSSFEVCVPKTPKT 40
 |||||||||||||||||||||||||||||||||||

Db 1 EDCIPWKGVNRHGDCEGLECWKRSSFEVCVPKTPKT 40

RESULT 2

ADY80805

ID ADY80805 standard; protein; 40 AA.

XX

AC ADY80805;

XX

DT 15-JUN-2007 (revised)

DT 02-JUN-2005 (first entry)

XX

DE Psalmotoxin 1 (PcTX1) SEQ ID NO 1.

XX

KW cytostatic; gene therapy; pharmaceutical; cellular transport; glioma;

KW breast tumor; endocrine disease; gynecology and obstetrics; melanoma;
KW cancer; neoplasm; Psalmotoxin 1; PCTX1; BOND_PC; GO8200; GO9405; GO19871.
XX
OS Psalmopoeus cambridgei.
XX
PN WO2005025518-A2.
XX
PD 24-MAR-2005.
XX
PF 13-SEP-2004; 2004WO-US029970.
XX
PR 11-SEP-2003; 2003US-0502034P.
XX
PA (UABR-) UAB RES FOUND.
XX
PI Benos DJ, Bubien JK, Gillespie GY;
XX
DR WPI; 2005-233410/24.
DR PC:NCBI; gi44888346.
XX
PT Treatment of tumor in subject, where tumor has expression of sodium
PT channel mediating constitutive inward sodium current, involves
PT administering composition comprising PCTX1 or variant of PCTX1 linked to
PT cytotoxic agent.
XX
PS Claim 46; SEQ ID NO 1; 63pp; English.
XX
CC The invention describes a method of treating a tumor in a subject in need
CC of the treatment, where the tumor has an expression of a sodium channel
CC mediating a constitutive inward sodium current. The method involves
CC administering an amount of a pharmaceutical composition comprising PCTX1
CC (Psalmotoxin 1) or a variant of PCTX1 linked to a cytotoxic agent. Also
CC described are: diagnosis to identify individuals with tumors having a
CC constitutive inward Na⁺ current; identifying agents that bind to a Na⁺
CC channel mediating a constitutive inward Na⁺ current; identifying agents
CC that modulate a constitutive inward Na⁺ current; and visualizing a tumor
CC in a subject in need of such visualization, where the tumor has an
CC expression of a Na⁺ channel mediating a constitutive inward Na⁺
CC current. The method is useful for treating a tumor in a subject, where
CC the tumor has an expression of a Na⁺ channel mediating a constitutive
CC inward Na⁺ current. It is preferably useful for treating glioma, breast
CC carcinoma, or melanoma. This is the amino acid sequence of Psalmotoxin 1
CC (PCTX1) from the venom of the south american tarantula.
CC
CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed
CC information from BOND.
XX
SQ Sequence 40 AA;

Query Match 100.0%; Score 246; DB 10; Length 40;
 Best Local Similarity 100.0%; Pred. No. 8.9e-22;
 Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 EDCIPWKGCVNRHGDCEGLECWKRSSFEVCVPKTPKT 40
 ||||||| ||||| ||||| ||||| ||||| |||||
 Db 1 EDCIPWKGCVNRHGDCEGLECWKRSSFEVCVPKTPKT 40

RESULT 3

AEG95747

ID AEG95747 standard; peptide; 40 AA.

XX

AC AEG95747;

XX

DT 15-JUN-2007 (revised)

DT 01-JUN-2006 (first entry)

XX

DE Psalmotoxin 1 (PcTx1).

XX

KW Acid sensing ion channel 1a inhibitor; psalmotoxin 1; PcTx1; ischemia;
 KW vasotropic; cardiovascular disease; drug screening; BOND_PC; G08200;
 KW G09405; GO19871.

XX

OS Psalmopoeus cambridgei.

XX

PN WO2006034035-A2.

XX

PD 30-MAR-2006.

XX

PF 16-SEP-2005; 2005WO-US033171.

XX

PR 16-SEP-2004; 2004US-0611241P.

XX

PA (VIRO-) VIROGENOMICS INC.

XX

PI Simon RP, Xiong Z;

XX

DR WPI; 2006-254090/26.

DR PC:NCBI; gi44888346.

XX

PT Treating ischemia comprises administering a therapeutically effective
 PT amount of acid sensing ion channel 1a inhibitor to an ischemic subject to
 PT reduce injury resulting from ischemia.

XX

PS Claim 7; SEQ ID NO 1; 55pp; English.

XX

CC The invention describes the treatment of ischemia which comprises
 CC administering a therapeutically effective amount of an acid sensing ion

CC channel 1a (ASIC1a) inhibitor to an ischemic subject to reduce injury
 CC resulting from ischemia. Also included are: a method of identifying drugs
 CC for treating ischemia, comprising obtaining ASIC1a inhibitor(s), and
 CC testing the ASIC1a inhibitor(s) for effect on an ischemic subject; a
 CC composition for treatment of ischemia, comprising an ASIC1a inhibitor
 CC disposed in a vehicle at a concentration that provides a therapeutically
 CC effective amount of the ASIC1a inhibitor for treatment of ischemia when
 CC administered to an ischemic subject; a method of manufacturing a
 CC medicament for treatment of ischemia, comprising obtaining an ASIC1a
 CC inhibitor, and combining the ASIC1a inhibitor with a vehicle to produce a
 CC medicament having an inhibitor for administration to an ischemic subject
 CC for treatment of ischemia; and the use of an ASIC1a inhibitor for the
 CC manufacture of a medicament to treat ischemia. The step of administering
 CC includes a step of administering an ASIC1a inhibitor that inhibits ASIC1a
 CC selectively relative to other ASIC family member(s) and includes a step
 CC of administering a peptide that includes a cystine knot. It includes a
 CC step of administering a peptide that is identical to or a derivative of
 CC PCTx1 (SEQ ID NO:1; see AEG95747). The peptide is a derivative that
 CC differs from PCTx1 by at least one deletion, substitution, and/or
 CC addition of amino acid(s). A second inhibitor is administered to the
 CC subject, and configured to inhibit at least one other channel that is not
 CC a member of the acid sensing ion channel family. The step of screening
 CC includes a step of detecting calcium ($\text{Ca } 2+$) flux into the cultured
 CC cells. The step of detecting $\text{Ca } 2+$ flux is performed
 CC electrophysiologically, with a $\text{Ca } 2+$ sensitive dye, and/or with dye that
 CC is sensitive to membrane potential. The present sequence represents full-
 CC length psalmotoxin 1 (PCTx1).

CC
 CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed
 CC information from BOND.
 XX

SQ Sequence 40 AA;

Query Match	100.0%	Score	246	DB	11	Length	40
Best Local Similarity	100.0%	Pred. No.	8.9e-22				
Matches	40	Conservative	0	Mismatches	0	Indels	0
				Gaps	0		

Qy	1 EDCIPWKGCVNRHGDCEGLECWKRSSFEVCVPKTPKT	40
Db	1 EDCIPWKGCVNRHGDCEGLECWKRSSFEVCVPKTPKT	40

RESULT 4

AFH53530

ID AFH53530 standard; protein; 40 AA.

XX

AC AFH53530;

XX

DT 26-JUL-2007 (first entry)

XX
DE Tarantula psalmotoxin 1 PcTx.
XX
KW therapeutic; prophylaxis; neuron; nervous system injury; ischemia;
KW hypoxia; neuroprotective; vasotropic; psalmotoxin 1; PcTx;
KW Alzheimers disease; hypertension; epilepsy; brain injury;
KW cerebrovascular ischemia; nootropic; hypotensive; cerebroprotective;
KW anticonvulsant.
XX
OS Psalmopoeus cambridgei.
XX
PN WO2007030580-A2.
XX
PD 15-MAR-2007.
XX
PF 08-SEP-2006; 2006WO-US034796.
XX
PR 09-SEP-2005; 2005US-0715881P.
PR 19-MAY-2006; 2006US-0801830P.
XX
PA (UYOR-) UNIV OREGON HEALTH SCI.
XX
PI Stenzel-Poore M, Stevens S, Simon R;
XX
DR WPI; 2007-458051/44.
XX
PT Protecting a cell in a subject against excitotoxic injury, ischemia or
PT hypoxia by administering a composition comprising an agent that activates
PT a Toll-like receptor and a composition comprising an acid sensing ion
PT channel inhibitor.
XX
PS Disclosure; SEQ ID NO 6; 42pp; English.
XX
CC The invention describes a method of protecting a cell in a subject
CC against excitotoxic injury, ischemia or hypoxia by administering a
CC composition comprising an agent that activates a Toll-like receptor,
CC preferably a CpG oligonucleotide, and a composition comprising an acid
CC sensing ion channel (ASIC) inhibitor, preferably Tarantula psalmotoxin 1
CC (PcTx) or a related peptide. The invention also includes use of an ASIC
CC inhibitor in preparing a medicament for increasing the protective effect
CC of preconditioning treatment with an agent that binds to and activates a
CC Toll-like receptor. The ASIC inhibitor is useful in preparing a
CC medicament for increasing the protective effect of preconditioning
CC treatment with an agent that binds to and activates a Toll-like receptor,
CC where the preconditioning treatment protects against injury by an
CC excitotoxic event, an ischemic event and/or a hypoxic event. This
CC sequence is Tarantula psalmotoxin 1 PcTx.
XX
SQ Sequence 40 AA;

Query Match 100.0%; Score 246; DB 12; Length 40;
 Best Local Similarity 100.0%; Pred. No. 8.9e-22;
 Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 EDCIPWKGCVNRHGDCEGLECWKRSSFEVCVPKTPKT 40
 |||||||||||||||||||||||||||||||||||
 Db 1 EDCIPWKGCVNRHGDCEGLECWKRSSFEVCVPKTPKT 40

RESULT 5

ARW11374

ID ARW11374 standard; protein; 40 AA.

XX

AC ARW11374;

XX

DT 24-JUL-2008 (first entry)

XX

DE P. cambridgei psalmotoxin 1 (PcTx1) fragment SEQ ID NO:1.

XX

KW therapeutic; brain injury; cerebrovascular ischemia; acidosis; vulnerability;
 KW cerebroprotective; vasotropic; metabolic-gen.; PcTx1; psalmotoxin; toxin;
 KW BOND_PC; GO8200; GO9405; GO19871.

XX

OS Psalmopoeus cambridgei.

XX

PN WO2008063676-A2.

XX

PD 29-MAY-2008.

XX

PF 21-NOV-2007; 2007WO-US024436.

XX

PR 21-NOV-2006; 2006US-0860522P.
 PR 20-NOV-2007; 2007US-00943546.

XX

PA (NEUR-) NEUROPROTECT INC.

XX

PI Simon RP, Xiong Z;

XX

DR WPI; 2008-G68865/42.
 DR PC:NCBI; gi44888346.

XX

PT Preventing or treating brain injury caused by stroke or seizure in
 PT subject, involves administering inhibitor of acid sensing ion channel and
 PT secondary neuroprotective therapeutic agent.

XX

PS Claim 10; SEQ ID NO 1; 120pp; English.

XX

CC The invention relates to a method of preventing or treating brain injury

CC caused by stroke, seizure or epilepsy in a subject. This is done by
 CC preventing acidosis by administering an inhibitor of acid sensing ion
 CC channel and a secondary neuroprotective therapeutic agent. The secondary
 CC neuroprotective therapeutic agent or any other adjunctive therapeutic
 CC agent that is an antagonist specific for a glutamate receptor,
 CC alkalinizing agent, anticoagulant, tissue plasminogen activator, aspirin
 CC or an anti-platelet agent. The current sequence is that of a fragment of
 CC the *P. cambridgei* derived psalmotoxin PcTx1.
 CC

CC Revised record issued on 03-JUL-2008 : Enhanced with precomputed
 CC information from BOND.

XX

SQ Sequence 40 AA;

Query Match 100.0%; Score 246; DB 13; Length 40;
 Best Local Similarity 100.0%; Pred. No. 8.9e-22;
 Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 EDCIPWKKGCVNRHGDCEGLECWKRRLSFEVCVPKTPKT 40
 |||||||||||||||||||||||||||||||||||||||

Db 1 EDCIPWKKGCVNRHGDCEGLECWKRRLSFEVCVPKTPKT 40

RESULT 6

ADY80806

ID ADY80806 standard; protein; 41 AA.

XX

AC ADY80806;

XX

DT 02-JUN-2005 (first entry)

XX

DE Psalmotoxin 1 (PcTX1) SEQ ID NO 2.

XX

KW cytostatic; gene therapy; pharmaceutical; cellular transport; glioma;

KW breast tumor; endocrine disease; gynecology and obstetrics; melanoma;

KW cancer; neoplasm; Psalmotoxin 1; PcTX1.

XX

OS Psalmopoeus cambridgei.

XX

PN WO2005025518-A2.

XX

PD 24-MAR-2005.

XX

PF 13-SEP-2004; 2004WO-US029970.

XX

PR 11-SEP-2003; 2003US-0502034P.

XX

PA (UABR-) UAB RES FOUND.

XX

PI Benos DJ, Bubien JK, Gillespie GY;

XX
DR WPI; 2005-233410/24.XX
PT Treatment of tumor in subject, where tumor has expression of sodium channel mediating constitutive inward sodium current, involves administering composition comprising PCTX1 or variant of PCTX1 linked to cytotoxic agent.XX
PS Claim 46; SEQ ID NO 2; 63pp; English.XX
CC The invention describes a method of treating a tumor in a subject in need of the treatment, where the tumor has an expression of a sodium channel mediating a constitutive inward sodium current. The method involves administering an amount of a pharmaceutical composition comprising PCTX1 (Psalmotoxin 1) or a variant of PCTX1 linked to a cytotoxic agent. Also described are: diagnosis to identify individuals with tumors having a constitutive inward Na + current; identifying agents that bind to a Na + channel mediating a constitutive inward Na + current; identifying agents that modulate a constitutive inward Na + current; and visualizing a tumor in a subject in need of such visualization, where the tumor has an expression of a Na + channel mediating a constitutive inward Na + current. The method is useful for treating a tumor in a subject, where the tumor has an expression of a Na + channel mediating a constitutive inward Na + current. It is preferably useful for treating glioma, breast carcinoma, or melanoma. This is the amino acid sequence of Psalmotoxin 1 (PCTX1) from the venom of the south american tarantula.XX
SQ Sequence 41 AA;

Query Match 100.0%; Score 246; DB 10; Length 41;
 Best Local Similarity 100.0%; Pred. No. 9.1e-22;
 Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1 EDCIPWKGVNRHGDCEGLECWKRSSFEVCVPKTPKT 40
Db	1 EDCIPWKGVNRHGDCEGLECWKRSSFEVCVPKTPKT 40

RESULT 7

AEG95748

ID AEG95748 standard; peptide; 38 AA.

XX
AC AEG95748;XX
DT 01-JUN-2006 (first entry)XX
DE Psalmotoxin 1 (PcTx1), N-terminal deletion SEQ ID NO:2.

KW Acid sensing ion channel 1a inhibitor; psalmotoxin 1; PCTx1; ischemia;
KW vasotropic; cardiovascular disease; drug screening.
XX
OS Psalmopoeus cambridgei.
OS Synthetic.
XX
PN WO2006034035-A2.
XX
PD 30-MAR-2006.
XX
PF 16-SEP-2005; 2005WO-US033171.
XX
PR 16-SEP-2004; 2004US-0611241P.
XX
PA (VIRO-) VIROGENOMICS INC.
XX
PI Simon RP, Xiong Z;
XX
DR WPI; 2006-254090/26.
XX
PT Treating ischemia comprises administering a therapeutically effective
PT amount of acid sensing ion channel 1a inhibitor to an ischemic subject to
PT reduce injury resulting from ischemia.
XX
PS Example 2; SEQ ID NO 2; 55pp; English.
XX
CC The invention describes the treatment of ischemia which comprises
CC administering a therapeutically effective amount of an acid sensing ion
CC channel 1a (ASIC1a) inhibitor to an ischemic subject to reduce injury
CC resulting from ischemia. Also included are: a method of identifying drugs
CC for treating ischemia, comprising obtaining ASIC1a inhibitor(s), and
CC testing the ASIC1a inhibitor(s) for effect on an ischemic subject; a
CC composition for treatment of ischemia, comprising an ASIC1a inhibitor
CC disposed in a vehicle at a concentration that provides a therapeutically
CC effective amount of the ASIC1a inhibitor for treatment of ischemia when
CC administered to an ischemic subject; a method of manufacturing a
CC medicament for treatment of ischemia, comprising obtaining an ASIC1a
CC inhibitor, and combining the ASIC1a inhibitor with a vehicle to produce a
CC medicament having an inhibitor for administration to an ischemic subject
CC for treatment of ischemia; and the use of an ASIC1a inhibitor for the
CC manufacture of a medicament to treat ischemia. The step of administering
CC includes a step of administering an ASIC1a inhibitor that inhibits ASIC1a
CC selectively relative to other ASIC family member(s) and includes a step
CC of administering a peptide that includes a cystine knot. It includes a
CC step of administering a peptide that is identical to or a derivative of
CC PCTx1 (SEQ ID NO:1; see AEG95747). The peptide is a derivative that
CC differs from PCTx1 by at least one deletion, substitution, and/or
CC addition of amino acid(s). A second inhibitor is administered to the
CC subject, and configured to inhibit at least one other channel that is not

CC a member of the acid sensing ion channel family. The step of screening
 CC includes a step of detecting calcium (Ca 2+) flux into the cultured
 CC cells. The step of detecting Ca 2+ flux is performed
 CC electrophysiologically, with a Ca 2+ sensitive dye, and/or with dye that
 CC is sensitive to membrane potential. The present sequence represents full-
 CC length psalmotoxin 1 (PcTx1), N-terminal deletion SEQ ID NO:2.
 XX

SQ Sequence 38 AA;

Query Match 95.5%; Score 235; DB 11; Length 38;
 Best Local Similarity 100.0%; Pred. No. 1.7e-20;
 Matches 38; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 3 CIPKWKGCVNRHGDCCCEGLECWKRSSFEVCVPKTPKT 40
 ||||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 1 CIPKWKGCVNRHGDCCCEGLECWKRSSFEVCVPKTPKT 38

RESULT 8

AFH53531

ID AFH53531 standard; peptide; 38 AA.

XX

AC AFH53531;

XX

DT 26-JUL-2007 (first entry)

XX

DE Tarantula psalmotoxin 1 PcTx peptide SEQ ID NO:7.

XX

KW therapeutic; prophylaxis; neuron; nervous system injury; ischemia;
 KW hypoxia; neuroprotective; vasotropic; psalmotoxin 1; PcTx;
 KW Alzheimers disease; hypertension; epilepsy; brain injury;
 KW cerebrovascular ischemia; nootropic; hypotensive; cerebroprotective;
 KW anticonvulsant.

XX

OS Psalmopoeus cambridgei.

XX

PN WO2007030580-A2.

XX

PD 15-MAR-2007.

XX

PF 08-SEP-2006; 2006WO-US034796.

XX

PR 09-SEP-2005; 2005US-0715881P.

PR 19-MAY-2006; 2006US-0801830P.

XX

PA (UYOR-) UNIV OREGON HEALTH SCI.

XX

PI Stenzel-Poore M, Stevens S, Simon R;

XX

DR WPI; 2007-458051/44.

XX

PT Protecting a cell in a subject against excitotoxic injury, ischemia or hypoxia by administering a composition comprising an agent that activates a Toll-like receptor and a composition comprising an acid sensing ion channel inhibitor.

XX

PS Disclosure; SEQ ID NO 7; 42pp; English.

XX

CC The invention describes a method of protecting a cell in a subject against excitotoxic injury, ischemia or hypoxia by administering a composition comprising an agent that activates a Toll-like receptor, preferably a CpG oligonucleotide, and a composition comprising an acid sensing ion channel (ASIC) inhibitor, preferably Tarantula psalmotoxin 1 (PcTx) or a related peptide. The invention also includes use of an ASIC inhibitor in preparing a medicament for increasing the protective effect of preconditioning treatment with an agent that binds to and activates a Toll-like receptor. The ASIC inhibitor is useful in preparing a medicament for increasing the protective effect of preconditioning treatment with an agent that binds to and activates a Toll-like receptor, where the preconditioning treatment protects against injury by an excitotoxic event, an ischemic event and/or a hypoxic event. This sequence is a Tarantula psalmotoxin 1 PcTx-derived peptide.

XX

SQ Sequence 38 AA;

Query Match 95.5%; Score 235; DB 12; Length 38;
 Best Local Similarity 100.0%; Pred. No. 1.7e-20;
 Matches 38; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 3 CIPKWKGVNRHGDCEGLECWKRSSFEVCVPKTPKT 40

|||||||||||||||||||||||||||||||||||

Db 1 CIPKWKGVNRHGDCEGLECWKRSSFEVCVPKTPKT 38

RESULT 9

ARW11375

ID ARW11375 standard; peptide; 38 AA.

XX

AC ARW11375;

XX

DT 24-JUL-2008 (first entry)

XX

DE P. cambridgei psalmotoxin 1 (PcTx1) deletion variant SEQ ID NO:2.

XX

KW therapeutic; brain injury; cerebrovascular ischemia; acidosis; vulnerability; cerebroprotective; vasotropic; metabolic-gen.; PcTx1; psalmotoxin; toxin.

XX

OS Psalmopoeus cambridgei.

XX
 PN WO2008063676-A2.

XX
 PD 29-MAY-2008.

XX
 PF 21-NOV-2007; 2007WO-US024436.

XX
 PR 21-NOV-2006; 2006US-0860522P.
 PR 20-NOV-2007; 2007US-00943546.

XX
 PA (NEUR-) NEUROPROTECT INC.

XX
 PI Simon RP, Xiong Z;

XX
 DR WPI; 2008-G68865/42.

XX
 PT Preventing or treating brain injury caused by stroke or seizure in
 PT subject, involves administering inhibitor of acid sensing ion channel and
 PT secondary neuroprotective therapeutic agent.

XX
 PS Claim 11; SEQ ID NO 2; 120pp; English.

XX
 CC The invention relates to a method of preventing or treating brain injury
 CC caused by stroke, seizure or epilepsy in a subject. This is done by
 CC preventing acidosis by administering an inhibitor of acid sensing ion
 CC channel and a secondary neuroprotective therapeutic agent. The secondary
 CC neuroprotective therapeutic agent or any other adjunctive therapeutic
 CC agent that is an antagonist specific for a glutamate receptor,
 CC alkalinizing agent, anticoagulant, tissue plasminogen activator, aspirin
 CC or an anti-platelet agent. The current sequence is that of a deletion
 CC variant of the *P. cambridgei* derived psalmotoxin Pctx1 with a 70 amino
 CC acid N-terminal deletion.

XX
 SQ Sequence 38 AA;

Query Match	95.5%	Score	235	DB	13	Length	38;
Best Local Similarity	100.0%	Pred. No.	1.7e-20;				
Matches	38	Conservative	0	Mismatches	0	Indels	0
Gaps	0						

Qy	3 CIPKWKGCVNRHGDCEGLECWKRRRSFEVCVPKTPKT	40
Db	1 CIPKWKGCVNRHGDCEGLECWKRRRSFEVCVPKTPKT	38

RESULT 10

AEG95749

ID AEG95749 standard; peptide; 37 AA.

XX

AC AEG95749;

XX
DT 01-JUN-2006 (first entry)
XX
DE Psalmotoxin 1 (PcTx1), C-terminal deletion SEQ ID NO:3.
XX
KW Acid sensing ion channel 1a inhibitor; psalmotoxin 1; PcTx1; ischemia;
KW vasotropic; cardiovascular disease; drug screening.
XX
OS Psalmodopeus cambridgei.
OS Synthetic.
XX
PN WO2006034035-A2.
XX
PD 30-MAR-2006.
XX
PF 16-SEP-2005; 2005WO-US033171.
XX
PR 16-SEP-2004; 2004US-0611241P.
XX
PA (VIRO-) VIROGENOMICS INC.
XX
PI Simon RP, Xiong Z;
XX
DR WPI; 2006-254090/26.
XX
PT Treating ischemia comprises administering a therapeutically effective
PT amount of acid sensing ion channel 1a inhibitor to an ischemic subject to
PT reduce injury resulting from ischemia.
XX
PS Example 2; SEQ ID NO 3; 55pp; English.
XX
CC The invention describes the treatment of ischemia which comprises
CC administering a therapeutically effective amount of an acid sensing ion
CC channel 1a (ASIC1a) inhibitor to an ischemic subject to reduce injury
CC resulting from ischemia. Also included are: a method of identifying drugs
CC for treating ischemia, comprising obtaining ASIC1a inhibitor(s), and
CC testing the ASIC1a inhibitor(s) for effect on an ischemic subject; a
CC composition for treatment of ischemia, comprising an ASIC1a inhibitor
CC disposed in a vehicle at a concentration that provides a therapeutically
CC effective amount of the ASIC1a inhibitor for treatment of ischemia when
CC administered to an ischemic subject; a method of manufacturing a
CC medicament for treatment of ischemia, comprising obtaining an ASIC1a
CC inhibitor, and combining the ASIC1a inhibitor with a vehicle to produce a
CC medicament having an inhibitor for administration to an ischemic subject
CC for treatment of ischemia; and the use of an ASIC1a inhibitor for the
CC manufacture of a medicament to treat ischemia. The step of administering
CC includes a step of administering an ASIC1a inhibitor that inhibits ASIC1a
CC selectively relative to other ASIC family member(s) and includes a step
CC of administering a peptide that includes a cystine knot. It includes a

CC step of administering a peptide that is identical to or a derivative of
 CC Pctx1 (SEQ ID NO:1; see AEG95747). The peptide is a derivative that
 CC differs from Pctx1 by at least one deletion, substitution, and/or
 CC addition of amino acid(s). A second inhibitor is administered to the
 CC subject, and configured to inhibit at least one other channel that is not
 CC a member of the acid sensing ion channel family. The step of screening
 CC includes a step of detecting calcium (Ca 2+) flux into the cultured
 CC cells. The step of detecting Ca 2+ flux is performed
 CC electrophysiologically, with a Ca 2+ sensitive dye, and/or with dye that
 CC is sensitive to membrane potential. The present sequence represents full-
 CC length psalmotoxin 1 (Pctx1), C-terminal deletion SEQ ID NO:3.

XX

SQ Sequence 37 AA;

Query Match 93.1%; Score 229; DB 11; Length 37;
 Best Local Similarity 100.0%; Pred. No. 8.8e-20;
 Matches 37; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 EDCIPWKKGCVNRHGDCEGLECWKRSSFEVCVPKT 37

|||||||||||||||||||||||||||||||||||||||

Db 1 EDCIPWKKGCVNRHGDCEGLECWKRSSFEVCVPKT 37

RESULT 11

AFH53532

ID AFH53532 standard; peptide; 37 AA.

XX

AC AFH53532;

XX

DT 26-JUL-2007 (first entry)

XX

DE Tarantula psalmotoxin 1 Pctx peptide SEQ ID NO:8.

XX

KW therapeutic; prophylaxis; neuron; nervous system injury; ischemia;
 KW hypoxia; neuroprotective; vasoactive; psalmotoxin 1; Pctx;
 KW Alzheimers disease; hypertension; epilepsy; brain injury;
 KW cerebrovascular ischemia; nootropic; hypotensive; cerebroprotective;
 KW anticonvulsants.

XX

OS Psalmopoeus cambridgei.

XX

PN WO2007030580-A2.

XX

PD 15-MAR-2007.

XX

PF 08-SEP-2006; 2006WO-US034796.

XX

PR 09-SEP-2005; 2005US-0715881P.

PR 19-MAY-2006; 2006US-0801830P.

XX
 PA (UYOR-) UNIV OREGON HEALTH SCI.
 XX

PI Stenzel-Poore M, Stevens S, Simon R;
 XX
 DR WPI; 2007-458051/44.
 XX

PT Protecting a cell in a subject against excitotoxic injury, ischemia or hypoxia by administering a composition comprising an agent that activates a Toll-like receptor and a composition comprising an acid sensing ion channel inhibitor.
 XX

PS Disclosure; SEQ ID NO 8; 42pp; English.
 XX

CC The invention describes a method of protecting a cell in a subject against excitotoxic injury, ischemia or hypoxia by administering a composition comprising an agent that activates a Toll-like receptor, preferably a CpG oligonucleotide, and a composition comprising an acid sensing ion channel (ASIC) inhibitor, preferably Tarantula psalmotoxin 1 (PcTx) or a related peptide. The invention also includes use of an ASIC inhibitor in preparing a medicament for increasing the protective effect of preconditioning treatment with an agent that binds to and activates a Toll-like receptor. The ASIC inhibitor is useful in preparing a medicament for increasing the protective effect of preconditioning treatment with an agent that binds to and activates a Toll-like receptor, where the preconditioning treatment protects against injury by an excitotoxic event, an ischemic event and/or a hypoxic event. This sequence is a Tarantula psalmotoxin 1 PcTx-derived peptide.
 XX

SQ Sequence 37 AA;

Query Match 93.1%; Score 229; DB 12; Length 37;
 Best Local Similarity 100.0%; Pred. No. 8.8e-20;
 Matches 37; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 EDCIPWKKGCVNRHGDCEGLECWKRSSFEVCVPKT 37

|||||||||||||||||||||||||||||||||||||||

Db 1 EDCIPWKKGCVNRHGDCEGLECWKRSSFEVCVPKT 37

RESULT 12

ARW11376

ID ARW11376 standard; peptide; 37 AA.

XX
 AC ARW11376;

XX

DT 24-JUL-2008 (first entry)

XX

DE P. cambridgei psalmotoxin 1 (PcTx1) deletion variant SEQ ID NO:3.

XX
 KW therapeutic; brain injury; cerebrovascular ischemia; acidosis; vulnerary;
 KW cerebroprotective; vasotropic; metabolic-gen.; PCTx1; psalmotoxin; toxin.
 XX
 OS Psalmopoeus cambridgei.
 XX
 PN WO2008063676-A2.
 XX
 PD 29-MAY-2008.
 XX
 PF 21-NOV-2007; 2007WO-US024436.
 XX
 PR 21-NOV-2006; 2006US-0860522P.
 PR 20-NOV-2007; 2007US-00943546.
 XX
 PA (NEUR-) NEUROPROTECT INC.
 XX
 PI Simon RP, Xiong Z;
 XX
 DR WPI; 2008-G68865/42.
 XX
 PT Preventing or treating brain injury caused by stroke or seizure in
 PT subject, involves administering inhibitor of acid sensing ion channel and
 PT secondary neuroprotective therapeutic agent.
 XX
 PS Claim 12; SEQ ID NO 3; 120pp; English.
 XX
 CC The invention relates to a method of preventing or treating brain injury
 CC caused by stroke, seizure or epilepsy in a subject. This is done by
 CC preventing acidosis by administering an inhibitor of acid sensing ion
 CC channel and a secondary neuroprotective therapeutic agent. The secondary
 CC neuroprotective therapeutic agent or any other adjunctive therapeutic
 CC agent that is an antagonist specific for a glutamate receptor,
 CC alkalinizing agent, anticoagulant, tissue plasminogen activator, aspirin
 CC or an anti-platelet agent. The current sequence is that of a deletion
 CC variant of the P. cambridgei derived psalmotoxin PCTx1 with a 72 amino
 CC acid C-terminal deletion.
 XX
 SQ Sequence 37 AA;

Query Match 93.1%; Score 229; DB 13; Length 37;
 Best Local Similarity 100.0%; Pred. No. 8.8e-20;
 Matches 37; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 EDCIPWKGCVNRHGDCEGLECWKRRLSFEVCVPKT 37
 |||||||||||||||||||||||||||||||
 Db 1 EDCIPWKGCVNRHGDCEGLECWKRRLSFEVCVPKT 37

RESULT 13

AEG95750

ID AEG95750 standard; peptide; 33 AA.

XX

AC AEG95750;

XX

DT 01-JUN-2006 (first entry)

XX

DE Psalmotoxin 1 (PcTx1), C-terminal deletion SEQ ID NO:4.

XX

KW Acid sensing ion channel 1a inhibitor; psalmotoxin 1; PcTx1; ischemia; vasotropic; cardiovascular disease; drug screening.

XX

OS Psalmopoeus cambridgei.

OS Synthetic.

XX

PN WO2006034035-A2.

XX

PD 30-MAR-2006.

XX

PF 16-SEP-2005; 2005WO-US033171.

XX

PR 16-SEP-2004; 2004US-0611241P.

XX

PA (VIRO-) VIROGENOMICS INC.

XX

PI Simon RP, Xiong Z;

XX

DR WPI; 2006-254090/26.

XX

PT Treating ischemia comprises administering a therapeutically effective amount of acid sensing ion channel 1a inhibitor to an ischemic subject to reduce injury resulting from ischemia.

XX

PS Example 2; SEQ ID NO 4; 55pp; English.

XX

CC The invention describes the treatment of ischemia which comprises administering a therapeutically effective amount of an acid sensing ion channel 1a (ASIC1a) inhibitor to an ischemic subject to reduce injury resulting from ischemia. Also included are: a method of identifying drugs for treating ischemia, comprising obtaining ASIC1a inhibitor(s), and testing the ASIC1a inhibitor(s) for effect on an ischemic subject; a composition for treatment of ischemia, comprising an ASIC1a inhibitor disposed in a vehicle at a concentration that provides a therapeutically effective amount of the ASIC1a inhibitor for treatment of ischemia when administered to an ischemic subject; a method of manufacturing a medicament for treatment of ischemia, comprising obtaining an ASIC1a inhibitor, and combining the ASIC1a inhibitor with a vehicle to produce a medicament having an inhibitor for administration to an ischemic subject

CC for treatment of ischemia; and the use of an ASIC1a inhibitor for the
 CC manufacture of a medicament to treat ischemia. The step of administering
 CC includes a step of administering an ASIC1a inhibitor that inhibits ASIC1a
 CC selectively relative to other ASIC family member(s) and includes a step
 CC of administering a peptide that includes a cystine knot. It includes a
 CC step of administering a peptide that is identical to or a derivative of
 CC PCTx1 (SEQ ID NO:1; see AEG95747). The peptide is a derivative that
 CC differs from PCTx1 by at least one deletion, substitution, and/or
 CC addition of amino acid(s). A second inhibitor is administered to the
 CC subject, and configured to inhibit at least one other channel that is not
 CC a member of the acid sensing ion channel family. The step of screening
 CC includes a step of detecting calcium (Ca 2+) flux into the cultured
 CC cells. The step of detecting Ca 2+ flux is performed
 CC electrophysiologically, with a Ca 2+ sensitive dye, and/or with dye that
 CC is sensitive to membrane potential. The present sequence represents full-
 CC length psalmotoxin 1 (PCTx1), C-terminal deletion SEQ ID NO:4.

XX
 SQ Sequence 33 AA;

Query Match	84.6%	Score	208	DB	11	Length	33
Best Local Similarity	100.0%	Pred. No.	2.5e-17				
Matches	33	Conservative	0	Mismatches	0	Indels	0
						Gaps	0

Qy 1 EDCIPWKKGCVNRHGDCEGLECWKRSSFEVC 33
 ||||||| ||||| ||||| ||||| ||||| |||||
 Db 1 EDCIPWKKGCVNRHGDCEGLECWKRSSFEVC 33

RESULT 14

AFH53533

ID AFH53533 standard; peptide; 33 AA.

XX

AC AFH53533;

XX

DT 26-JUL-2007 (first entry)

XX

DE Tarantula psalmotoxin 1 PCTx peptide SEQ ID NO:9.

XX

KW therapeutic; prophylaxis; neuron; nervous system injury; ischemia;
 KW hypoxia; neuroprotective; vasotropic; psalmotoxin 1; PCTx;
 KW Alzheimers disease; hypertension; epilepsy; brain injury;
 KW cerebrovascular ischemia; nootropic; hypotensive; cerebroprotective;
 KW anticonvulsant.

XX

OS Psalmopoeus cambridgei.

XX

PN WO2007030580-A2.

XX

PD 15-MAR-2007.

XX
 PF 08-SEP-2006; 2006WO-US034796.

XX
 PR 09-SEP-2005; 2005US-0715881P.
 PR 19-MAY-2006; 2006US-0801830P.

XX
 PA (UYOR-) UNIV OREGON HEALTH SCI.

XX
 PI Stenzel-Poore M, Stevens S, Simon R;

XX
 DR WPI; 2007-458051/44.

XX
 PT Protecting a cell in a subject against excitotoxic injury, ischemia or hypoxia by administering a composition comprising an agent that activates a Toll-like receptor and a composition comprising an acid sensing ion channel inhibitor.

XX
 PS Disclosure; SEQ ID NO 9; 42pp; English.

XX
 CC The invention describes a method of protecting a cell in a subject against excitotoxic injury, ischemia or hypoxia by administering a composition comprising an agent that activates a Toll-like receptor, preferably a CpG oligonucleotide, and a composition comprising an acid sensing ion channel (ASIC) inhibitor, preferably Tarantula psalmotoxin 1 (PcTx) or a related peptide. The invention also includes use of an ASIC inhibitor in preparing a medicament for increasing the protective effect of preconditioning treatment with an agent that binds to and activates a Toll-like receptor. The ASIC inhibitor is useful in preparing a medicament for increasing the protective effect of preconditioning treatment with an agent that binds to and activates a Toll-like receptor, where the preconditioning treatment protects against injury by an excitotoxic event, an ischemic event and/or a hypoxic event. This sequence is a Tarantula psalmotoxin 1 PcTx-derived peptide.

XX
 SQ Sequence 33 AA;

Query Match 84.6%; Score 208; DB 12; Length 33;
 Best Local Similarity 100.0%; Pred. No. 2.5e-17;
 Matches 33; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1 EDCIPWKGVNRHGDCEGLECWKRSSFEVC 33
Db	1 EDCIPWKGVNRHGDCEGLECWKRSSFEVC 33

RESULT 15
 ARW11377
 ID ARW11377 standard; peptide; 33 AA.
 XX

AC ARW11377;
XX
DT 24-JUL-2008 (first entry)
XX
DE P. cambridgei psalmotoxin 1 (PcTx1) deletion variant SEQ ID NO:4.
XX
KW therapeutic; brain injury; cerebrovascular ischemia; acidosis; vulnerability; cerebroprotective; vasotropic; metabolic-gen.; PcTx1; psalmotoxin; toxin.
XX
OS Psalmopoeus cambridgei.
XX
PN WO2008063676-A2.
XX
PD 29-MAY-2008.
XX
PF 21-NOV-2007; 2007WO-US024436.
XX
PR 21-NOV-2006; 2006US-0860522P.
PR 20-NOV-2007; 2007US-00943546.
XX
PA (NEUR-) NEUROPROTECT INC.
XX
PI Simon RP, Xiong Z;
XX
DR WPI; 2008-G68865/42.
XX
PT Preventing or treating brain injury caused by stroke or seizure in subject, involves administering inhibitor of acid sensing ion channel and secondary neuroprotective therapeutic agent.
XX
PS Claim 13; SEQ ID NO 4; 120pp; English.
XX
CC The invention relates to a method of preventing or treating brain injury caused by stroke, seizure or epilepsy in a subject. This is done by preventing acidosis by administering an inhibitor of acid sensing ion channel and a secondary neuroprotective therapeutic agent. The secondary neuroprotective therapeutic agent or any other adjunctive therapeutic agent that is an antagonist specific for a glutamate receptor, alkalinizing agent, anticoagulant, tissue plasminogen activator, aspirin or an anti-platelet agent. The current sequence is that of a deletion variant of the P. cambridgei derived psalmotoxin PcTx1 with a 74 amino acid C-terminal deletion.
XX
SQ Sequence 33 AA;

Query Match 84.6%; Score 208; DB 13; Length 33;
Best Local Similarity 100.0%; Pred. No. 2.5e-17;
Matches 33; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 EDCIPWKGVNRHGDCEGLECWKRSSFEVC 33
 |||||||||||||||||||||||||||||||
Db 1 EDCIPWKGVNRHGDCEGLECWKRSSFEVC 33

Search completed: November 24, 2008, 10:47:45
Job time : 78.037 secs

SCORE 3.0